II. Amendments to the Specification

Please amend the specification as presented below. Specifically, page 6 has been amended to read "when the braking demand is greater than the predetermined brake demand threshold, a step 54 occurs." Applicants contend this amendment overcomes the Examiner's objection to the specification and is supported by claim 7 and Figure 3.

Please replace the third full paragraph on pages 2 and 3 with the following amended paragraph:

A method of operation is included which comprises the step of determining a throttle position of a vehicle based on inputs from a throttle position sensor. The step of comparing the throttle position to a predetermined throttle position threshold is included. The method generates a signal for the battery switch to decouple the battery from the generator thereby preventing charging of the battery when the throttle position is greater than the predetermined throttle position threshold. The method compares the brake pedal position signal to a predetermined brake pedal threshold when the throttle position is less than the predetermined throttle position threshold. The battery switch decouples the battery from the generator when the brake pedal position signal is greater than the predetermined brake pedal threshold ~~(i.e., demanding a higher deceleration)~~ and the throttle position is less than the predetermined throttle position threshold ~~(i.e., requesting less acceleration)~~. The wheel speed sensor signal based on the wheel speed is compared to a predetermined wheel speed threshold when the brake pedal position signal is less than the predetermined brake pedal threshold

and the throttle position is less than the predetermined throttle position threshold. The method generates a signal for the battery switch to decouple the battery from the generator when the wheel speed is less than the predetermined wheel speed threshold, the brake pedal position signal is less than the predetermined brake pedal threshold, and the throttle position is less than the predetermined throttle position threshold. When the wheel speed is greater than the predetermined wheel speed threshold, the method generates a signal for the battery switch to decouple the battery from the generator if the generator output voltage is less than battery voltage. A signal is generated to electrically couple the battery to the generator thereby enabling the generator to charge the battery when the generator output voltage is greater than the battery voltage, the wheel speed is greater than the predetermined wheel speed threshold, the throttle position is less than the predetermined throttle position threshold, and the brake pedal position signal is less than the predetermined brake pedal threshold.

Please replace the first full paragraph on page 5 with the following amended paragraph:

In Figure 2, there is illustrated an electrical schematic for the electromagnetic and friction braking system 10. As the generator 24 generates power, the output is rectified and applied to a capacitor 42. The capacitor 42 stabilizes the rectified output of the generator 24. When the battery switch 32 is closed the battery 26 supplies power to a power rail 41. The power rail 41 is a voltage summing junction for the generator 24 and the battery 26. The power rail

41 provides the electrical connection between the battery switch 32 and the front and rear eddy current devices 18 and 16. After the power module 40 receives signals from the controller 28, either the generator 24 or the battery 26 energizes the front and rear eddy current devices 18 and 16. The power module 40 includes front eddy current switches 34 and rear eddy current switches 36. The controller 28 generates signals for the power module 40. Preferably, the signals generated for the power module 40 are pulse-width-modulated. Thereafter, either the generator 24 or the battery 26 according to the method below energizes the front and rear eddy current devices 18 and 16. The controller 28 monitors the current draw of the front and rear eddy current devices 18 and 16. The controller 28 monitors the current draw of the front and rear eddy current devices 18 and 16 by receiving a current feed back signal over a power line 17. A voltmeter enables the controller 28 to monitor the rectified output voltage of the generator 24. Figure 4 illustrates an alternate configuration of the electromagnetic and friction braking system 10. Duplicate reference numerals are used for components common with Figure 1. The embodiment in Figure 4 differs from Figure 1 in that the generator 24 mechanically engages the driveshaft 27 at an opposite end of the driveshaft 27 from the transmission 25.

Please replace the second full paragraph on page 5 and 6 with the following amended paragraph:

Figure 3 illustrates a regenerative braking method 44 for the electromagnetic and friction braking system 10 according to the present

invention. A step 46 is the entrance into the regenerative braking method 44. At a step 48, the controller 28 receives a signal from the throttle position sensor 33. The controller 28 compares the throttle position signal (TP) to the predetermined throttle position threshold (Tol_{TP}). If the throttle position is greater than the predetermined throttle position threshold, a step 50 occurs. One skilled in the art will recognize that sensing the throttle position enhances braking performance and may be excluded without departing from the scope of the invention. At the step 50, the output of the generator 24 is applied to the front and rear eddy current devices 18 and 16. At the step 50, the generator is isolated from the battery. When the throttle position is less than the predetermined throttle position threshold, a step 52 occurs. At the step 52, the controller 28 receives signals from the braked pedal sensor referred to herein as the braking demand. The controller 28 compares the braking demand to the predetermined brake demand threshold (Tol_{BRK}) which corresponds to a predetermined brake pedal position. Preferably, the predetermined brake demand threshold is about 1 m/s^2. When the braking demand is ~~less~~ greater than the predetermined brake demand threshold, a step 54 occurs. At the step 54, the generator 24 supplies power to the front and rear eddy current devices 18 and 16 without charging the battery 26. If the braking demand is less than the predetermined brake demand threshold, a step 56 occurs. At the step 56, the controller receives a wheel speed sensor signal from the wheel speed sensor 37 that correspond to the speed of the front and rear wheels 14 and 12. The wheel speed (WhlSpd) is compared to a predetermined wheel speed threshold (Tol_w). Preferably, the

predetermined wheel speed threshold is at least 50 revolutions per minute. When the wheel speed is less than the predetermined wheel speed threshold, a step 60 occurs. At the step 60, the output of the generator 24 is applied to the front and rear eddy current devices 18 and 16. During the step 60, the battery 26 is isolated from the generator 24. If the wheel speed is greater than the predetermined wheel speed threshold, a step 57 occurs. In the step 57, the voltage of the generator 24 (V_{GEN}) is compared with the voltage of the battery 26 (V_{BATT}). The method isolates the battery from the generator to prevent battery charging when the generator voltage is less than the battery voltage in step 59. When the generator voltage is greater than the battery voltage, the generator charges the battery in step 58. In the step 58, the generator 24 produces an amount of power in excess of that required to power the front and rear eddy current devices 18 and 16. The controller 28 generates signals for the battery switch 32 thereby allowing the generator 24 to charge the battery 26. A step 62 completes each loop through the regenerative braking method 44.